**Before the**
**FEDERAL COMMUNICATIONS COMMISSION**
**Washington, D.C. 20554**

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| In the Matter of | ) | |
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| Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems | ) | CC Docket No. 94-102 |
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| Reconsideration of the *Richardson Order* | ) | DA 01-2885 |

# COMMENTS OF VOICESTREAM WIRELESS CORPORATION

VoiceStream Wireless Corporation ("VoiceStream") submits these comments in response to the issues raised by the petitions for reconsideration and clarification that have been filed in response to the Commission's October 17, 2001 *Richardson Order*.[1]

VoiceStream is committed to meeting Commission timelines for deploying E-911 services. Deployment of Phase II service will require an enormous commitment of planning, engineering, coordination and construction resources from all parties, including the PSAPs, data base providers, local exchange carriers (LECs) and VoiceStream. In order to meet Commission timelines, it is critical that VoiceStream make the most efficient use of its finite resources for Phase II deployment. To do this, VoiceStream must document each Phase II service request it receives to make sure that efforts are focused on those PSAPs that are truly prepared to implement Phase II service.

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[1] *See Public Notice,* "Wireless Telecommunications Bureau Seeks Comment on Petitions for Reconsideration Regarding Public Safety Answering Point Requests for Phase II Enhanced 911," DA 01-2885 (Dec. 12, 2001). *See also Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems,* Docket No. 94-102, *Order,* FCC 01-293 (Oct. 17, 2001)("*Richardson Order*").

## I. THE COMMISSION SHOULD CONFIRM THAT E911 CONVERSION NEED NOT BEGIN UNTIL IT IS DOCUMENTED THAT NECESSARY PHASE II ALI DATABASE UPGRADES WILL BE COMPLETED IN SIX MONTHS

Sprint PCS asks the Commission to confirm that "PSAPs must document not only that the necessary CPE upgrades will be installed within six months, but also that necessary ALI database upgrades will be completed within six months."[2] VoiceStream agrees. The Commission's objectives — "PSAPs timely receive . . . Phase II service and . . . wireless carriers are not asked to commit resources needlessly"[3] — will *not* be achieved unless necessary Phase II upgrades to ALI databases are actually completed before PSAPs and carriers complete their installation of their Phase II modifications.

It bears noting at the outset that, with the recent modification, Rule 20.18(j) has become internally inconsistent. The Rule has always provided that a carrier's E911 obligations are triggered "only if" the PSAP "is capable of receiving and utilizing the data elements associated with the service."[4] The *Richardson Order* sought to clarify these obligations. As modified, however, the Rule suggests that a carrier's six-month implementation period commences "if [the PSAP] can demonstrate that it has made a timely request . . . for the Automatic Identification Location (ALI) database upgrade necessary to receive the Phase II information."[5] But a PSAP request for ALI database upgrades does not mean that the LEC will actually make the requested upgrades or complete the upgrades within a carrier's six month deployment period. VoiceStream has advised the Commission previously that there simply cannot be operational Phase II service *unless and until* Phase II ALI database upgrades are timely installed:

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[2] Sprint PCS Petition for Expedited Reconsideration and Clarification at 6 (Nov. 30, 2001).

[3] *Richardson Order* at ¶ 13.

[4] 47 C.F.R. § 20.18(j).

[5] *Id.* as modified by the *Richardson Order.*

> For all practical purposes, the ALI database is a "bottleneck" — PSAPs will not receive the Phase II data elements that carriers generate unless the ALI database is Phase II compatible.[6]

A PSAP cannot be capable of receiving and utilizing Phase II service unless and until its ALI database is Phase II capable — yet Rule 20.18(j), as recently modified, does not appear to require that necessary ALI database upgrades be completed within the six month deployment period.[7] Any presumption created in the Rule that the ALI database upgrades will be completed in six months upon the mere request of the PSAP would be arbitrary and capricious, as there can be no assumption that all LECs would be ready, willing or able to provision upgrades in a timely fashion.

The Commission should adopt rules that achieve its stated policy objectives. The Commission has articulated two objectives in its *Richardson Order*: (1) "avoid the unnecessary expenditure of carrier and PSAP resources" and (2) ensure that "the PSAP will be ready to receive . . . Phase II information *at the time* that the wireless carrier's obligation to deliver that information becomes due."[8] These objectives will not be achieved unless the ALI database is actually upgraded within six months of a PSAP's request for Phase II service.

The record evidence is undisputed that Phase II compatible ALI databases are a "critical component" of Phase II service, and that there will be no Phase II service unless the ALI data-

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[6] VoiceStream Reply Comments, Docket No. 94-102, at 6 (Aug. 1, 2001). *See also* Voice Stream Reply Comments, Docket No. 94-102, at 2-3 (May 3, 2001); VoiceStream Comments, Docket No. 94-102, at 15-16 (April 23, 2001).

[7] Although PSAPs often have LECs operate their ALI databases, the FCC recently reaffirmed that ALI databases are part of the E911 network for which the PSAPs have ultimate responsibility. *See* Letter from Thomas J. Sugrue, Chief, Wireless Telecommunications Bureau, to Marlys R. Davis, E911 Program Manager, King County E-911 Program Office (May 7, 2001).

[8] *Richardson Order* at ¶ 1 (emphasis added).

base has been upgraded.[9] The record evidence is also uncontroverted that many ALI database operators do not intend to make necessary Phase II upgrades in the near future. For example, in May 2001 VoiceStream advised the Commission of Qwest's announcement that it would be two-to-four years before its ALI databases would become Phase II capable.[10] BellSouth similarly announced last August that it will "not offer a Phase II solution."[11] It makes no sense for PSAPs or carriers operating in areas where BellSouth or Qwest operate to commence Phase II conversions until the LECs make the necessary Phase II upgrades to ALI databases.

This implementation issue is especially important to carriers like VoiceStream, whose Phase II solution requires equipment upgrades at base stations and other network infrastructure serving a PSAP requesting Phase II service.[12] As network equipment manufacturers begin to ramp up commercial production of Phase II network equipment in the short term, the public interest simply would not be served if the initially scarce network equipment is deployed in an area where a PSAP is not capable of receiving Phase II service, with the result that the carrier is unable to satisfy the needs of another PSAP that is fully Phase II capable.

In summary, the public interest would be served best if each PSAP demonstrated not only that the necessary CPE upgrades will be installed within six months of the PSAP's request, but also that necessary ALI database upgrades will be completed in the six months.

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[9] *See* NENA Report Card to the Nation: The Effectiveness, Accessibility and Future of America's 9-1-1 Service, at 16 (Sept. 11, 2001).

[10] *See* VoiceStream Reply Comments, Docket No. 94-102, at 2 (May 3, 2001).

[11] *See* Carrier Notification from Jim Brinkley, Senior Director, BellSouth Interconnection Services, to Wireless Carriers, SN9182565 (Aug. 13, 2001), *appended as* Exhibit 2 to Sprint PCS Reply Comments and Further Supplemental Report, Docket No. 94-102 (Sept. 4, 2001).

[12] VoiceStream is deploying an Enhanced Observed Time Difference ("E-OTD") solution for Phase II, which is the approach specified in international GSM standards. E-OTD requires the installation of Location Measurement Units ("LMUs") at most base stations within and immediately surrounding the service area of a PSAP requesting Phase II service. Substantial quantities of other equipment will have to be added to VoiceStream's network to deploy Phase II service. *See* VoiceStream Third Semi-Annual Report, Docket No. 94-102, at 19-20 (Oct. 2, 2001).

## II. THE COMMISSION SHOULD ADOPT A TOLLING PERIOD IF IT DOES NOT REQUIRE PSAPS TO DOCUMENT THEIR PHASE II READINESS AT THE TIME OF THE REQUEST

Cingular asks the Commission to clarify that PSAPs should submit supporting documentation with their Phase II request.[13] VoiceStream agrees. The Commission has determined that it is appropriate for PSAPs to document their Phase II readiness[14], but the PSAPs do not need to submit such documentation until the carrier requests it.[15] As BellSouth demonstrates, making the recommended change would reduce the paperwork burden and will expedite the provision of Phase II service, because the carriers will always ask for the documentation in any event.[16] These projects are much too expensive to undertake without verification. Requiring the submission of documentation with the request will further ensure that the PSAP understands the gravity of its request, both for the PSAP and the carrier. As VoiceStream recently advised the Commission, only one-third of PSAPs have responded to VoiceStream's request to verify their Phase II readiness and the readiness of their E911 network.[17] If this response rate were to continue, and there is no reason to assume it will not, VoiceStream could end up stranding two-thirds of its limited E-OTD network equipment in areas where the data would be useless.

Sprint PCS asks, alternatively, that the Commission toll the six-month implementation period while a PSAP assembles its supporting documentation.[18] VoiceStream agrees with this alternative proposal, as well, if the Commission chooses not to require supporting documentation

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[13] *See* Cingular Petition for Reconsideration at 12-13 (Dec. 3, 2001).

[14] *See Richardson Order* at ¶ 30.

[15] Rule 20.18(j) does not address the timing that such PSAP documentation should be made available, but the *Order* suggests the documentation need not be furnished until a carrier requests it. *See Richardson Order* at ¶ 11.

[16] *See id.* at 13.

[17] *See* VoiceStream Third Semi-Annual Report, Docket No. 94-102, at 12 (Oct. 2, 2001).

[18] *See* Sprint PCS Petition at 12-13.

with PSAP requests. The Commission has determined that carriers should implement a Phase II request within six months and, as Sprint PCS points out, a carrier "obviously should not be penalized (*i.e.,* receive less time for installation) because a PSAP requires additional time to provide documentation that the Commission has determined is appropriate."[19] Again, the low response percentage VoiceStream has experienced regarding its requests for Phase II readiness documentation demonstrates the magnitude of this potential problem. Stranding two-thirds of the available resources on potentially invalid requests confounds the Commission's goal of rapid Phase II deployment.

## III. THE COMMISSION SHOULD ADDRESS THE "E-2 INTERFACE" ISSUES NOW.

The Commission has recognized that it is "necessary that some common interface standard be employed by the carrier and the PSAP," but it declined to require the "E-2 interface" standard that industry and the public safety community jointly developed.[20] Sprint PCS asks the Commission to reconsider this decision or, alternatively, at least to confirm that ALI databases must include the "pull" and "refresh" capabilities.[21] VoiceStream supports Sprint PCS' request for reconsideration and request for alternative relief.

As a result of public safety's support of the E-2 interface, most carriers have been implementing the E-2 interface standard in their networks, and it will likely be very difficult and expensive, especially for national carriers, to accommodate a grab bag of different interfaces in various localities. The custom engineering work required to implement unique implementation solutions would make it extremely difficult for carriers to meet the six month deployment time-

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[19] *Id.* at 12.

[20] *See Richardson Order* at n.31 and ¶ 19.

[21] *See* Sprint PCS Petition at 7-12.

line. Introducing more complexity into the deployment process is simply not wise or necessary, again confounding the Commission's rapid Phase II deployment goal.

Commission adoption of the E-2 interface standard would facilitate the timely implementation of Phase II service and, for that reason alone, the Commission should reconsider its decision. However, should the Commission not adopt the E-2 standard at this time, and a PSAP wish to implement a customized interface (assuming such an interface is technically feasible), the desired interface should include, at minimum, "pull" and "refresh" capabilities. These capabilities should allow the PSAP to communicate directly with the carrier's switch in order to collect information not available at 911 call setup. Carriers must complete a 911 call within about two seconds after an E911 call is made in order to meet the short call setup time allowed by public safety for 911 calls. The complexity of receiving all Phase II data inputs and making the necessary calculations mean Phase II location information will rarely be available within two seconds, especially with the relatively new location technology involved. Thus, if an ALI database is incapable of making a subsequent request for the location data (*e.g.,* five seconds after call setup), the PSAP will not receive the location information.

One could argue that a "refresh" capability is required by Rule 20.18(j) — given that a PSAP will not likely receive location information on most E911 calls without such a capability and, therefore, a PSAP would not be capable of receiving and utilizing the Phase II data elements. The public interest is not served if carriers are capable of delivering Phase II location information but PSAPs are incapable of receiving the information when it becomes available. The public interest is also not served if PSAPs makes an investment in certain Phase II capabilities only to learn later that the investment will not achieved the desired end: receipt of location information.

The E-2 interface was designed by public safety and industry to provide Phase II location data reliably to the PSAP. It allows the PSAP to retrieve location data even if the calculations are not completed within their strict call setup time parameters. Further, it allows PSAPs to initiate a location update within the carrier's network, thus allowing the PSAP to track the location of a 911 caller throughout the duration of the call. VoiceStream believes that PSAPs will not be satisfied with Phase II service if it does not include these capabilities and, once they see the limitations of interconnection methods which do not allow them, they eventually will want to upgrade to the E-2 interface. Like virtually all "cost-saving" shortcuts, they usually end up being torn out and replaced at greater expense later on. The redundant effort of having to interconnect twice—once without E-2 and later with it—represents an unnecessary waste of the finite resources available to all parties and is not in the public interest. Would emergency callers want the PSAPs to take this risky "cost saving" short cut? The Commission rules ought to reflect the caller's answer to that question.

## IV. CONCLUSION

For the foregoing reasons, VoiceStream respectfully requests that the Commission modify its *Richardson Order* in the manner discussed above.

Respectfully submitted

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